AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A solid-state image sensor device having an image sensing portion performing photoelectric conversion in both progressive mode in which all picture element signals are output independently, and interlaced mode in which interlaced scannings are performed and the picture element signals obtained in respective scannings in said image sensing portion are superimposed, said sensor device comprising:

a photodiode within the image sensing portion; and

a substrate-bias generation circuit for applying a bias voltage to the substrate of said image sensing portion and for controlling said bias voltage in said progressive mode to be smaller than the bias voltage while operating in the interlaced mode.

2. (Previously Presented) A driving method for a solid-state image sensor device having an image sensing portion including a photodiode within the image sensing portion for performing photoelectric conversion said image sensing portion operating in both progressive mode in which all picture element signals are output independently, and interlaced mode in which a plurality of scannings are performed and picture element signals obtained in respective scannings are superimposed, said method including applying a bias voltage to the substrate of said image sensing portion, wherein during said progressive mode said bias voltage is smaller than that in said interlaced mode.

3. (Previously Presented) A camera comprised of a solid-state image sensor device having an image sensing portion for performing photoelectric conversion and a substrate-bias generation circuit, an optical system receiving incident light from a subject and forming an image on said image sensing portion of said solid-state image sensor device, a driving system for driving said solid-state image sensor device, and a signal processing system for processing the signal output from said solid-state image sensor device to obtain a video signal, wherein the image sensing portion includes a photodiode structure, and further

wherein said driving system selectively operates in progressive mode in which all picture element signals are output independently, and interlaced mode in which a plurality of scannings are performed and the picture element signals obtained in respective scannings are superimpose, and wherein the bias voltage applied to the substrate in said progressive mode is smaller than that in said interlaced mode.

4. (Previously Presented) The solid state image sensor device of claim 1, wherein the substrate bias generation circuit adjusts the substrate bias voltage during the progressive mode of operation such that a potential difference is generated between a doped region and a well of the photodiode which is greater than during interlaced operation.

5. (Previously Presented) The method of driving a solid state image sensor device of claim 2, wherein the step of applying the substrate bias voltage during the progressive mode of operation is performed such that a potential difference is generated

between a doped region and a well of the photodiode which is greater than during interlaced operation.

6. (Previously Presented) The camera of claim 3, further comprising: applying the substrate bias voltage during the progressive mode of operation such that a potential difference is generated between a doped region and a well of the photodiode which is greater than during interlaced operation.

Please add the following new claims:

7. (New) The solid-state image sensor device of claim 1, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

8. (New) The driving method for a solid-state image sensor device of claim 2, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

9. (New) The camera of claim 3, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

10. (New) The solid-state image sensor device of claim 4, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

11. (New) The method of driving a solid state image sensor device of claim 5, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

12. (New) The camera of claim 6, wherein a potential of a vertical transfer device portion and a read-out gate are controlled by a common electrode and a light shielding structure extends over the common electrode to the photodiode.

13. (New) The solid-state image sensor device of claim 1, wherein any one of two possible substrate voltages are applied to the substrate.

14. (New) The driving method of a solid-state image sensor device of claim 2, wherein any one of two possible substrate voltages are applied to the substrate.

15. (New) The camera of claim 3, wherein only one of two possible substrate voltages are applied to the substrate during the read out of image signals.

16. (New) The solid-state image sensor device of claim 4, wherein only one of two possible substrate voltages are applied to the substrate during the read out of image signals.

17. (New) The method of driving a solid-state image sensor device of claim 5, wherein only one of two possible substrate voltages are applied to the substrate during the read out of image signals.

18. (New) The camera of claim 6, wherein only one of two possible substrate voltages are applied to the substrate during the read out of image signals.